

306

Memorandum

To: Stephanie Sibbet (Boeing)
Brian Mossman (Boeing)
Scott Zachary (Haley & Aldrich)

CC: Frank Lenzo

From: Jim Nguyen

Date: 4/18/03

Re: Hydraulic Test Results (Bromide Tracer Test) – Former C-6 Facility

ARCADIS has prepared this technical memorandum to summarize the results of the bromide tracer test performed at the former Boeing C-6 facility located in Los Angeles, California. This test is the third step in the hydraulic testing process conducted to better understand groundwater flow beneath the site. The first two steps included the slug test and pressure injection test conducted in July 2002. Based on data from the initial tests, hydraulic conductivity and groundwater velocity was estimated, and it was determined a cone penetrometer testing (CPT) rig could be used to install amendment points to 90 feet below ground surface (bgs). Results were summarized in a memorandum dated October 24, 2002. The purpose of the bromide tracer test was to further evaluate the hydraulic properties of the water-bearing zones and assess the potential radius of influence for an amendment point for the Upper and Lower B-Sand. The test was conducted in accordance with the Hydraulic Test Memorandum submitted to Boeing on June 26, 2002.

The bromide tracer test was conducted in the Middle Bellflower Aquitard that extends to a depth of approximately 115 feet below ground surface (bgs) that consists of the B-Sand, the Middle Bellflower Mud (BFM), and the C-Sand. The test was conducted in the upper and lower layer of the B-Sand; referenced as the Upper and Lower B-Sand. The Upper B-Sand is composed primarily of silty sand, with the upper and lower contacts situated at approximately 65 feet to 75 feet bgs (13 to 23 feet below Mean Sea Level (MSL)). The Lower B-Sand is composed primarily of sand to gravelly sand with the upper and lower contact situated at approximately 75 feet to 90 feet bgs (23 to 38 feet below MSL). Please refer to Figures 1 and 2 for the location of the bromide tracer test.

Summarized below are well network, test procedures, results, and conclusions and recommendations.

Well Network

Amendment points HT-0001A and HT-0001B were used to deliver the tracer to the groundwater in the Upper B-Sand and Lower B-Sand, respectively. Two down gradient monitoring points (HT-0003 and MW-0001), and one cross gradient monitoring point (HT-0002) were used during the tracer test (Figure 2). Each location has dual-nested monitoring points for a total of six discreet well screen intervals. The points are screened between 65 and 75 feet below bgs (targeting the Upper B Sand and

designated with an "A" suffix following the well number), and between 80 and 90 feet bgs (targeting the Lower B-Sand and designated with an "B" suffix). Construction boring logs were included in the June 26, 2002 memo.

Bromide Test Procedures

The bromide test was conducted on March 5, 2003. The depth to groundwater was measured and groundwater samples were collected from all wells to establish baseline condition (HT-0001A, HT-0001B, HT-0002A, HT-0002B, HT-0003A, HT-0003B, MW-0001A, and MW-0001B). The tracer solution consisted of approximately 1.5 pounds of potassium bromide and 400 gallons of water, and was thoroughly mixed in a trailer-mounted tank. Groundwater samples were collected at 15-minute increments during injection activities, one hour after injection, and approximately one month after injection (April 2, 2003). In addition, depths to groundwater were measured from the monitoring wells after injecting 200 gallons of solution and again at 1 hour after injecting 400 gallons.

The first test included testing the Lower B-Sand. A total of 400 gallons was readily added to amendment well HT-0001B. The duration of injection was 33 minutes at a pressure of 8 pressure per square inch (psi). The second test included testing the Upper B-Sand. A total of 400 gallons was added to amendment well HT-0001A. The duration and pressure of injection was longer and higher (as expected due to the finer lithology) at 70 minutes at a pressure of 15 psi. Similar to the pressure test conducted in July 2002, both wells were effective at delivering solution and no leakage was observed. Injection activities for the Lower and Upper B-Sand are summarized below.

Test 1 (Lower B-Sand, Sand to Gravelly Sand):

- Total volume injected = 400 gallons
- Bromide added = 1.5 lbs
- Injection pressure = approx. 8 psi
- Duration of test = 33 minutes
- Flow rate = 12 gpm

Test 2 (Upper B-Sand, Silty Sand):

- Total volume injected = 400 gallons
- Bromide added = 1.5 lbs
- Injection pressure = approx. 15 psi
- Duration of test = 70 minutes
- Flow rate = 5.7 gpm

Results

Bromide analytical results and changes in groundwater elevation are presented in Tables 1 and 2, respectively. Graphs displaying the changes in bromide concentrations in the Upper and Lower B-Sand are illustrated in Figures 3 and 4, respectively. Laboratory analytical results are included in Appendix A.

During injection activities, water levels were observed to increase in all monitoring wells. For example, during injection of the Upper B-Sand, water level rose 0.93 feet from the nearest monitoring well (3 feet away) and 0.55 from the farthest monitoring well (15 feet away). During injection of the Lower B-Sand, water level rose 0.95 feet from the nearest monitoring well (3 feet away) and 0.64 from the farthest monitoring well (15 feet away).

For the Upper B-Sand, bromide concentrations were observed to increase in the amendment well (HT-0001A) from 1.7 mg/L during baseline sampling to 292 after injecting the tracer.

Concentrations from samples collected from this well decreased to 13.8 mg/L after one month (28 days). Bromide concentrations increased from the nearest monitoring well located 3 feet away (HT-0002A). Concentrations from samples collected in well HT-0002A increased from 2.2 mg/L during baseline sampling to 7.1 mg/L during injection activities and slightly decreased to 5.7 mg/L after one month. Bromide concentrations also increased from the monitoring well located 5 feet away (HT-0003A). Concentrations from samples collected in well HT-0003A increased from 2.1 mg/L during baseline sampling to 3.0 mg/L during injection activities and further increased to 7.3 mg/L after one month. Bromide concentrations were relatively unchanged from the monitoring well located 15 feet away (MW-0001A).

For the Lower B-Sand, bromide concentrations were observed to increase at the amendment well (HT-0001B) from 6.0 mg/L during baseline sampling to 289 mg/L after injecting the tracer.

Concentrations from samples collected in this well declined to 263 mg/L after one month (28 days). Due to the more permeable lithology (as compared to the Upper B-Sand) and the hydraulic influence observed at the monitoring wells, it was expected that the tracer would have readily disperse and travel downgradient via advective flow. The relatively unchanged concentrations could either indicate that the tracer did not migrate away from the well (which is unlikely due to the more permeable lithology) or the data is anomalous.

Bromide concentrations were relatively unchanged from the three monitoring wells (HT-0002B, HT-0003B, and MW-0001B). Probable causes could be due to potential preferential flow paths associated with the sand to gravelly sand lithology. The tracer may have traveled through channels within the subsurface and therefore were not detected at the monitoring wells. Furthermore, the pressure used during injection (8 psi) may have created preferential paths; a lower injection pressure may minimize the potential for preferential movement. Given the following information that (1) the previous groundwater injection rates were indicative of a higher flow rate aquifer, (2) that CPT data indicated soils that would be conducive of higher flow rates, (3) that seven sets of groundwater samples were collected at the same depths, and (4) well construction is sound, it can be concluded the data appears to be anomalous.

Unfortunately, the wells have been recently abandoned, and therefore cannot be resampled for additional confirmational testing.

Conclusions and Recommendations

Based on the results of the bromide tracer test, the following conclusions and recommendations can be made:

1. Based on the bromide test in the Upper B-Sand, the estimated groundwater velocity is approximately 26 feet per year. This is based on observing an increased in bromide concentrations traveling 2 feet in 28 days. This is consistent with the slug test data that estimated the velocity to be between 17 and 27 feet per year.
2. Hydraulic influence was observed at all monitoring wells (3, 5, and 15 feet away) during injection in both the Upper and Lower B-Sand.
3. The injection flow rates for both the Upper and Lower B-Sand were consistent with the flow rates achieved during the injection pressure test.

4. For the Upper B-Sand, the immediate radius of influence was observed at 3 feet. The radius of influence was observed at 5 feet after one month. It is estimated that 15 feet of influence will be achieved in approximately 6 months.
5. For the Lower B-Sand, due to the inclusive bromide tracer data, results from the Upper B-Sand will be used for well spacing design. The lithology in the Upper B-Sand is composed of finer lithology as compared to the Lower B-Sand and will provide for a conservative estimate. In addition, it is recommended to inject at a lower pressure to minimize any potential for preferential pathway.
6. Maintain the spacing of the amendment wells proposed in the Workplans.
7. Increase the proposed injection volume from 1% to 2% (based on ARCADIS' experience, a range between 1 to 3% has been successful, the higher range will provide a larger zone of influence).

Figures:

- 1-Hydraulic Test Location
- 2-Hydraulic Test Layout
- 3- Bromide Analytical Results (Upper B-Sand)
- 4- Bromide Analytical Results (Lower B-Sand)

Appendix:

- A – Laboratory Analytical Report

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Table 1:
Bromide Concentration (Tracer Injected on March 5, 2003)
 Former Boeing C-6 Facility, Torrance

Well ID	Time after Injection (mins)						Time after Injections (Days)
	Baseline	15	30	45	90	120	
Upper B - Sand							Bromide Concentration (mg/L)
MW0001A	1.7		2.0	2.0		2.1	2.0
HT0001A	1.7					292	13.8
HT0002A	2.2		7.1	4.7		5.1	5.7
HT0003A	2.1		2.5	3.0		2.3	7.3
Lower B-Sand							Bromide Concentration (mg/L)
MW0001B	1.1	1.2	1.2		1.5		1.90
HT0001B	6.0				289		263
HT0002B	0.88	0.89	0.90		0.9		0.90
HT0003B	0.51	0.54	0.52		0.51		0.52

Notations:

mg/L = milligrams per liter

mins = minutes

KBr = potassium bromide

Note:

- 1) Sample collection times are approximately at 15 minutes increment
- 2) Baseline concentrations collected approximately 1 hour before the injection

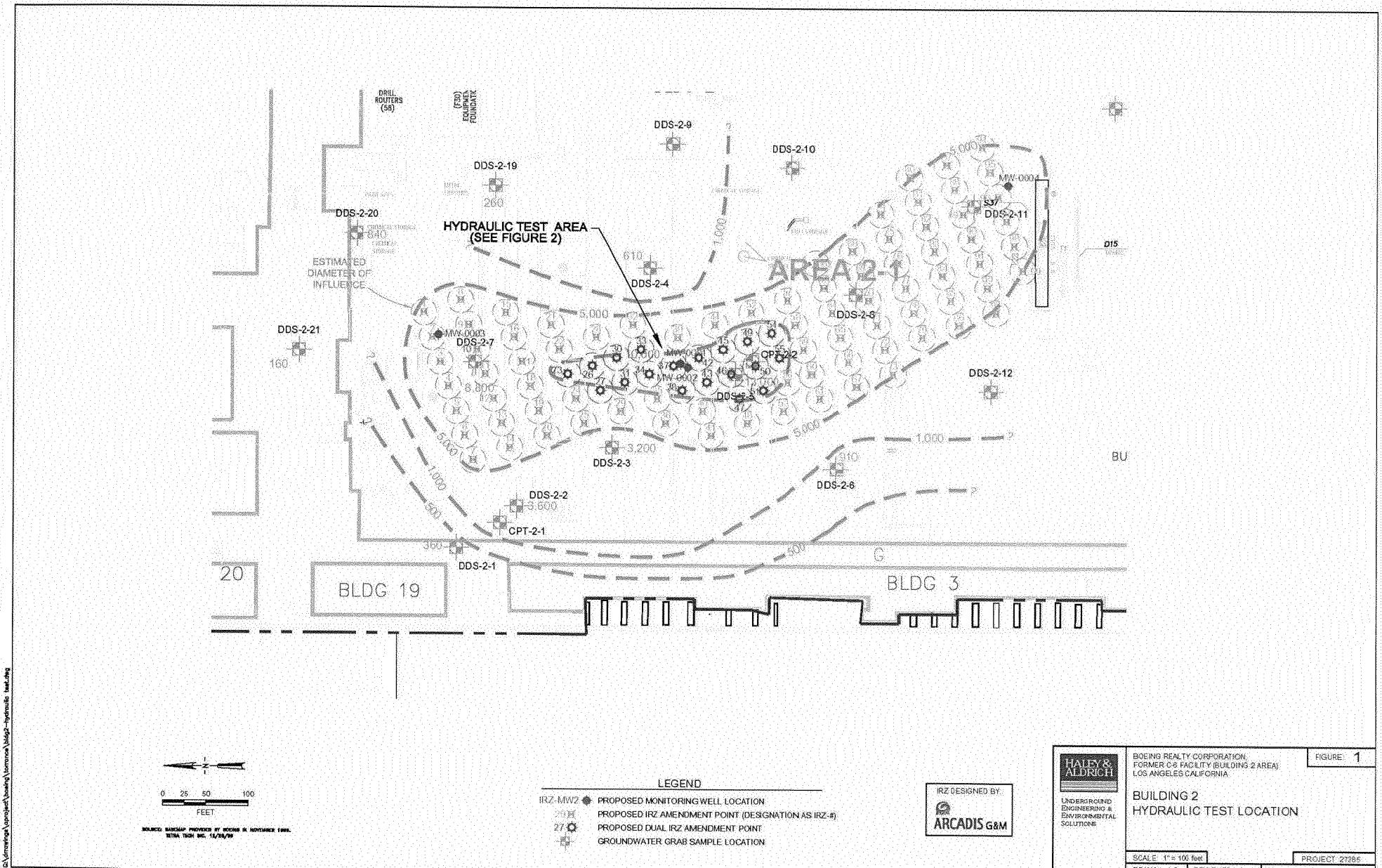
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Table 2:
Change in Groundwater Elevation During Injection
Former Boeing C-6 Facility, Los Angeles

Well ID	Depth to Groundwater (DTW) and Change in Elevation (Delta) (feet)				
	DTW - Baseline	DTW after 200 gallons	DTW one hour after 400 gallons	Delta, after 200 gallons	Delta, one hour after 400 gallons
Upper B - Sand					
MW0001A	68.58	68.03	68.20	0.55	0.38
HT0001A	67.81	--	67.24	--	--
HT0002A	66.63	65.70	66.35	0.93	0.28
HT0003A	67.25	66.65	67.15	0.10	0.10
Lower B-Sand					
MW0001B	68.3	67.66	68.18	0.64	0.12
HT0001B	67.9	--	67.73	--	--
HT0002B	67.20	66.25	66.56	0.95	0.64
HT0003B	67.76	66.65	67.22	0.54	0.54

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Figures



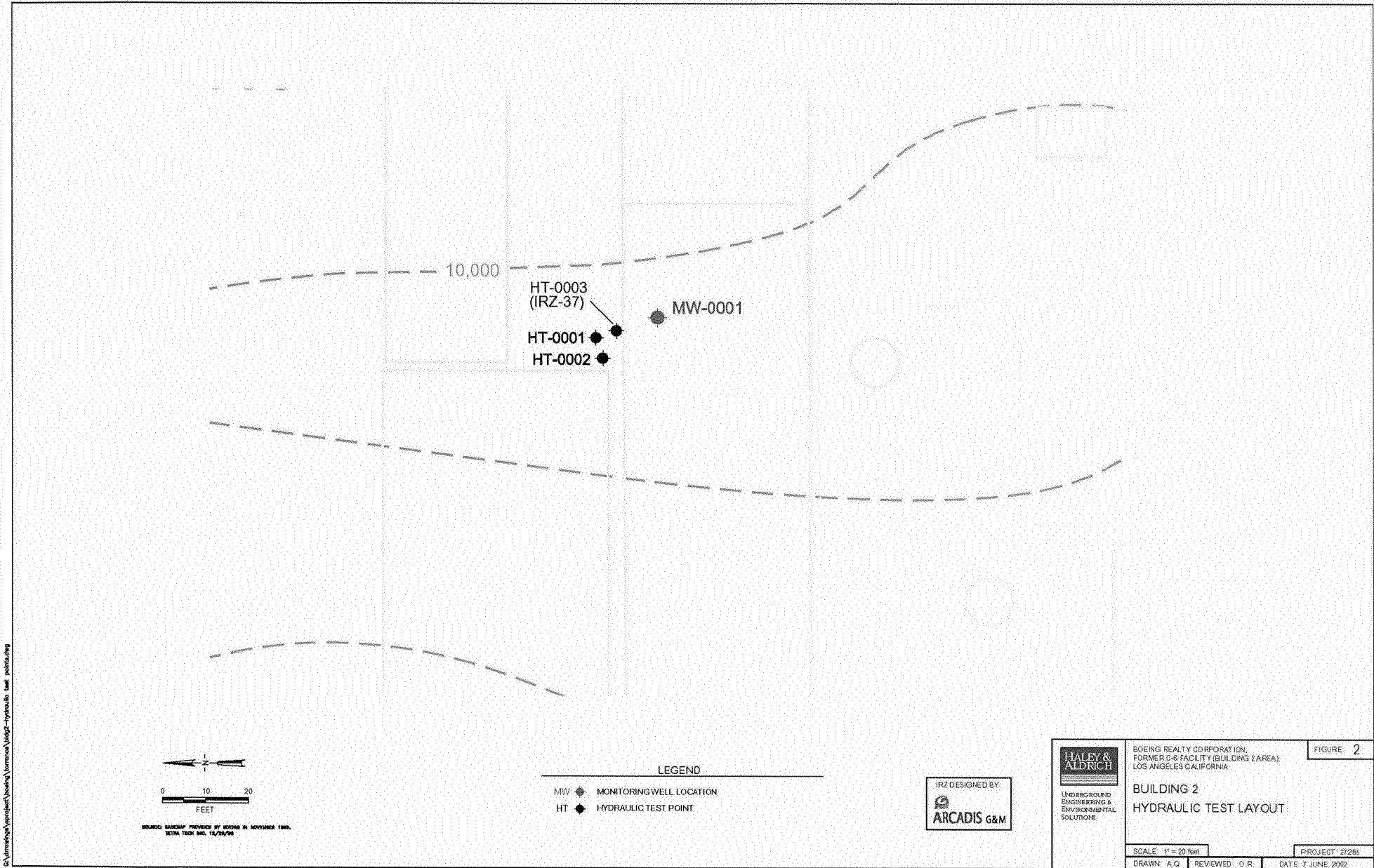
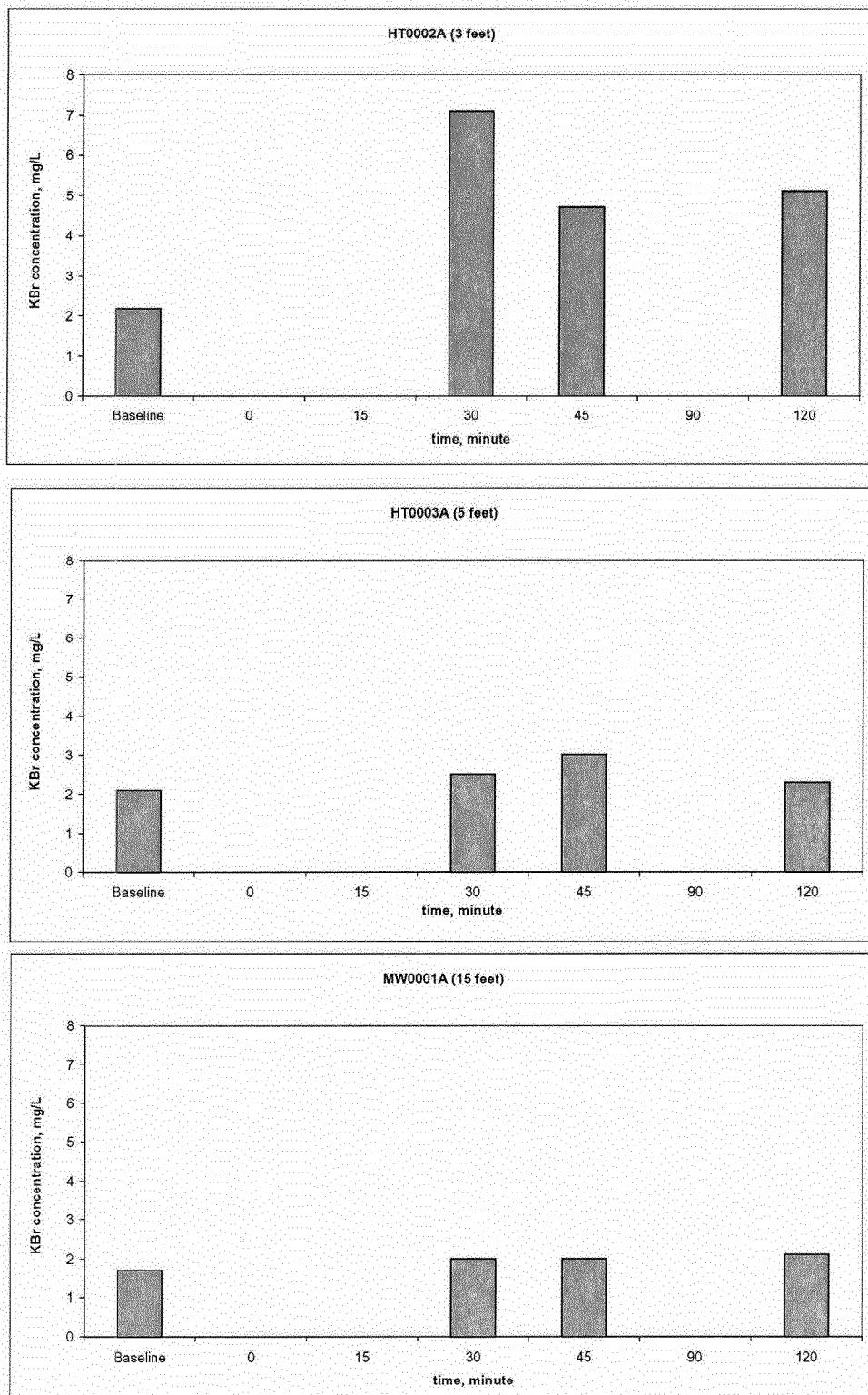


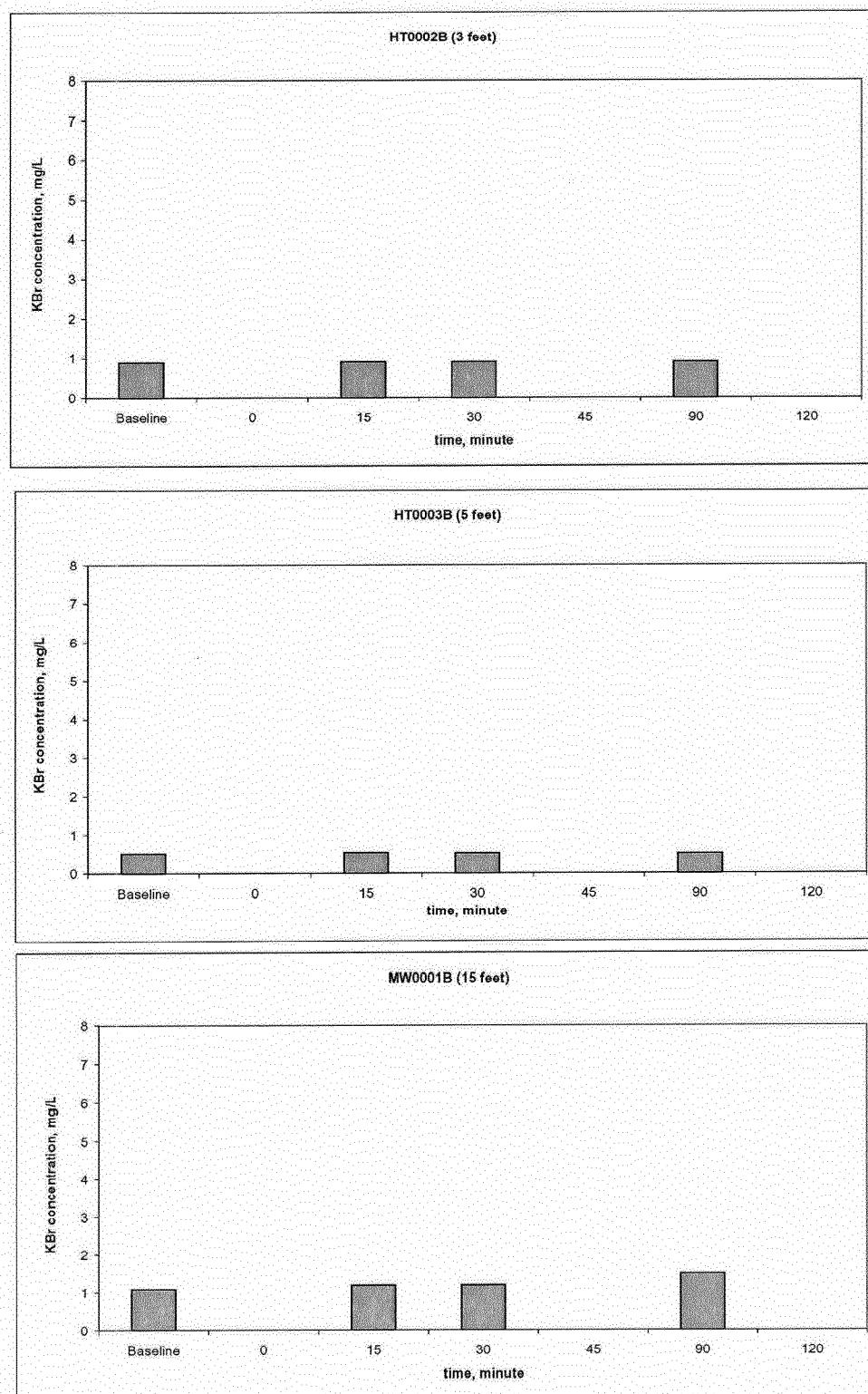
Figure 3
Bromide Analytical Results (Upper B-Sand)
Former Boeing C-6 Facility, Los Angeles, California



Note:

- 1) Sample collection times are approximately at 15 minutes increment.
- 2) Baseline concentrations collected approximately 1 hour before the injection.
- 3) "0" time refers to the time injection of molasses was initiated.
- 4) All samples were collected on March 5, 2003. Results for the April 2, 2003 sampling event not shown.

Figure 4
Bromide Analytical Results (Lower B-Sand)
Former Boeing C-6 Facility, Los Angeles, California



Note:

- 1) Sample collection times are approximately at 15 minutes increment.
- 2) Baseline concentrations collected approximately 1 hour before the injection.
- 3) "0" time refers to the time injection of molasses was initiated.
- 4) All samples were collected on March 5, 2003. Results for the April 2, 2003 sampling event not shown.

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Appendix A

Laboratory Analytical Report

ANALYTICAL REPORT

Boeing C6/AGM

Lot #: E3C060175

Olivia Edwards

ARCADIS Geraghty & Miller, Inc

SEVERN TRENT LABORATORIES, INC.

**Diane Suzuki
Project Manager**

March 13, 2003

EXECUTIVE SUMMARY - Detection Highlights

E3C060175

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
HT0002B_WG030503_0001 03/05/03 10:30	001			
Bromide	0.88	0.50	mg/L	MCAWW 300.0A
HT0002B_WG030503_0003 03/05/03 12:02	003			
Bromide	0.89	0.50	mg/L	MCAWW 300.0A
HT0002B_WG030503_0005 03/05/03 13:17	005			
Bromide	0.90	0.50	mg/L	MCAWW 300.0A
HT0003B_WG030503_0001 03/05/03 10:40	006			
Bromide	0.51	0.50	mg/L	MCAWW 300.0A
HT0003B_WG030503_0003 03/05/03 12:03	008			
Bromide	0.54	0.50	mg/L	MCAWW 300.0A
HT0003B_WG030503_0005 03/05/03 13:18	010			
Bromide	0.51	0.50	mg/L	MCAWW 300.0A
HT0001B_WG030503_0001 03/05/03 11:30	011			
Bromide	6.0	0.50	mg/L	MCAWW 300.0A
HT0001B_WG030503_0002 03/05/03 13:18	012			
Bromide	289	50.0	mg/L	MCAWW 300.0A
MW0001B_WG030503_0001 03/05/03 10:50	013			
Bromide	1.1	0.50	mg/L	MCAWW 300.0A
MW0001B_WG030503_0003 03/05/03 12:03	015			
Bromide	1.2	0.50	mg/L	MCAWW 300.0A
MW0001B_WG030503_0005 03/05/03 13:19	017			
Bromide	1.5	0.50	mg/L	MCAWW 300.0A

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

E3C060175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
HT0002A_WG030503_0001 03/05/03 10:35	018			
Bromide	2.2	0.50	mg/L	MCAWW 300.0A
HT0002A_WG030503_0004 03/05/03 15:20	021			
Bromide	7.1	0.50	mg/L	MCAWW 300.0A
HT0002A_WG030503_0007 03/05/03 17:00	024			
Bromide	5.1	0.50	mg/L	MCAWW 300.0A
HT0003A_WG030503_0001 03/05/03 10:45	025			
Bromide	2.1	0.50	mg/L	MCAWW 300.0A
HT0003A_WG030503_0004 03/05/03 15:20	028			
Bromide	2.5	0.50	mg/L	MCAWW 300.0A
HT0003A_WG030503_0007 03/05/03 17:00	031			
Bromide	2.3	0.50	mg/L	MCAWW 300.0A
MW0001A_WG030503_0001 03/05/03 10:55	032			
Bromide	1.7	0.50	mg/L	MCAWW 300.0A
MW0001A_WG030503_0004 03/05/03 15:20	035			
Bromide	2.0	0.50	mg/L	MCAWW 300.0A
MW0001A_WG030503_0007 03/05/03 17:00	038			
Bromide	2.1	0.50	mg/L	MCAWW 300.0A
HT0001A_WG030503_0001 03/05/03 11:35	039			
Bromide	1.7	0.50	mg/L	MCAWW 300.0A
HT0001A_WG030503_0002 03/05/03 17:00	040			
Bromide	292	50.0	mg/L	MCAWW 300.0A

METHODS SUMMARY

E3C060175

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Bromide	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SAMPLE SUMMARY

E3C060175

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FJNVR	001	HT0002B_WG030503_0001	03/05/03	10:30
FJNV1	003	HT0002B_WG030503_0003	03/05/03	12:02
FJNV3	005	HT0002B_WG030503_0005	03/05/03	13:17
FJNV4	006	HT0003B_WG030503_0001	03/05/03	10:40
FJNV6	008	HT0003B_WG030503_0003	03/05/03	12:03
FJNV8	010	HT0003B_WG030503_0005	03/05/03	13:18
FJNWA	011	HT0001B_WG030503_0001	03/05/03	11:30
FJNWC	012	HT0001B_WG030503_0002	03/05/03	13:18
FJNWD	013	MW0001B_WG030503_0001	03/05/03	10:50
FJNWG	015	MW0001B_WG030503_0003	03/05/03	12:03
FJNWJ	017	MW0001B_WG030503_0005	03/05/03	13:19
FJNWK	018	HT0002A_WG030503_0001	03/05/03	10:35
FJNWP	021	HT0002A_WG030503_0004	03/05/03	15:20
FJNWV	024	HT0002A_WG030503_0007	03/05/03	17:00
FJNWW	025	HT0003A_WG030503_0001	03/05/03	10:45
FJNW3	028	HT0003A_WG030503_0004	03/05/03	15:20
FJNW7	031	HT0003A_WG030503_0007	03/05/03	17:00
FJNW8	032	MW0001A_WG030503_0001	03/05/03	10:55
FJNXF	035	MW0001A_WG030503_0004	03/05/03	15:20
FJNXP	038	MW0001A_WG030503_0007	03/05/03	17:00
FJNXR	039	HT0001A_WG030503_0001	03/05/03	11:35
FJN2R	040	HT0001A_WG030503_0002	03/05/03	17:00

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0002B_WG030503_0001

General Chemistry

**Lot-Sample #....: E3C060175-001 Work Order #....: FJNVR Matrix.....: WG
Date Sampled...: 03/05/03 10:30 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	0.88	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time..: 00:34	Analyst ID.....: 000022	
	Instrument ID..: W01			MS Run #.....: 3069075	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0002B_WG030503_0003

General Chemistry

Lot-Sample #....: E3C060175-003 Work Order #....: FJNV1 Matrix.....: WG
Date Sampled....: 03/05/03 12:02 Date Received...: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	0.89	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time..: 00:53		Analyst ID.....: 0000225
	Instrument ID..: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0002B_WG030503_0005

General Chemistry

**Lot-Sample #....: E3C060175-005 Work Order #....: FJNV3 Matrix.....: WG
Date Sampled....: 03/05/03 13:17 Date Received..: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	0.90	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time..: 01:11		Analyst ID.....: 0000225
	Instrument ID..: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0003B_WG030503_0001

General Chemistry

Lot-Sample #....: E3C060175-006 Work Order #....: FJNV4 Matrix.....: WG
Date Sampled....: 03/05/03 10:40 Date Received...: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	0.51	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 01:30		Analyst ID.....: 0000225
	Instrument ID...: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0003B_WG030503_0003

General Chemistry

**Lot-Sample #....: E3C060175-008 Work Order #....: FJNV6 Matrix.....: WG
Date Sampled....: 03/05/03 12:03 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	0.54	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 01:49		Analyst ID.....: 0000225
				Instrument ID...: W01	MS Run #.....: 3069075	MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0003B_WG030503_0005

General Chemistry

**Lot-Sample #....: E3C060175-010 Work Order #....: FJNV8 Matrix.....: WG
Date Sampled...: 03/05/03 13:18 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	0.51	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 02:07		Analyst ID.....: 0000225
	Instrument ID...: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0001B_WG030503_0001

General Chemistry

**Lot-Sample #....: E3C060175-011 Work Order #....: FJNWA Matrix.....: WG
Date Sampled....: 03/05/03 11:30 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	6.0	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 02:26		Analyst ID.....: 0000225
	Instrument ID...: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0001B_WG030503_0002

General Chemistry

**Lot-Sample #....: E3C060175-012 Work Order #....: FJNWC Matrix.....: WG
Date Sampled...: 03/05/03 13:18 Date Received..: 03/06/03 09:45**

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>PREP</u>
					<u>ANALYSIS DATE</u>	<u>BATCH #</u>
Bromide	289	50.0	mg/L	MCAWW 300.0A	03/10/03	3069190
		Dilution Factor:	50	Analysis Time...: 12:18	Analyst ID.....: 0000225	
		Instrument ID...:	W01	MS Run #.....: 3069138	MDL.....: 5.0	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW0001B_WG030503_0001

General Chemistry

**Lot-Sample #....: E3C060175-013 Work Order #....: FJNWD Matrix.....: WG
Date Sampled....: 03/05/03 10:50 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	1.1	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
		Dilution Factor: 1		Analysis Time..: 03:03	Analyst ID.....: 0000228	
		Instrument ID...: W01		MS Run #.....: 3069075	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW0001B_WG030503_0003

General Chemistry

Lot-Sample #....: E3C060175-015 Work Order #....: FJNWG Matrix.....: WG
Date Sampled...: 03/05/03 12:03 Date Received..: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	1.2	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 03:22		Analyst ID.....: 0000225
	Instrument ID..: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW0001B_WG030503_0005

General Chemistry

**Lot-Sample #....: E3C060175-017 Work Order #....: FJNWJ Matrix.....: WG
Date Sampled....: 03/05/03 13:19 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	1.5	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 04:18		Analyst ID.....: 0000225
	Instrument ID...: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0002A_WG030503_0001

General Chemistry

Lot-Sample #....: E3C060175-018 Work Order #....: FJNWK Matrix.....: WG
Date Sampled....: 03/05/03 10:35 Date Received...: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	2.2	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time..: 04:37		Analyst ID.....: 0000225
	Instrument ID...: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0002A_WG030503_0004

General Chemistry

Lot-Sample #....: E3C060175-021 Work Order #....: FUNWP Matrix.....: WG
Date Sampled....: 03/05/03 15:20 Date Received...: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	7.1	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time..: 04:55		Analyst ID.....: 0000225
	Instrument ID...: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0002A_WG030503_0007

General Chemistry

**Lot-Sample #....: E3C060175-024 Work Order #....: FJNWV Matrix.....: WG
Date Sampled....: 03/05/03 17:00 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	5.1	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 05:14		Analyst ID.....: 0000225
	Instrument ID...: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0003A_WG030503_0001

General Chemistry

Lot-Sample #....: E3C060175-025 Work Order #....: FJNWW Matrix.....: WG
Date Sampled....: 03/05/03 10:45 Date Received...: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	2.1	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 05:33		Analyst ID.....: 0000225
	Instrument ID...: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0003A_WG030503_0004

General Chemistry

**Lot-Sample #....: E3C060175-028 Work Order #....: FJNW3 Matrix.....: WG
Date Sampled....: 03/05/03 15:20 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	2.5	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 05:51		Analyst ID.....: 0000225
				Instrument ID...: W01	MS Run #.....: 3069075	MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0003A_WG030503_0007

General Chemistry

**Lot-Sample #....: E3C060175-031 Work Order #....: FJNW7 Matrix.....: WG
Date Sampled....: 03/05/03 17:00 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	2.3	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 06:10		Analyst ID.....: 0000225
	Instrument ID...: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW0001A_WG030503_0001

General Chemistry

**Lot-Sample #....: E3C060175-032 Work Order #....: FJNW8 Matrix.....: WG
Date Sampled....: 03/05/03 10:55 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	1.7	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 06:29	Analyst ID.....: 0000225	
	Instrument ID...: W01			MS Run #.....: 3069075	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW0001A_WG030503_0004

General Chemistry

Lot-Sample #....: E3C060175-035 Work Order #....: FJNXF Matrix.....: WG
Date Sampled....: 03/05/03 15:20 Date Received...: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	2.0	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 06:48		Analyst ID.....: 0000225
	Instrument ID...: W01			MS Run #.....: 3069075		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW0001A_WG030503_0007

General Chemistry

**Lot-Sample #....: E3C060175-038 Work Order #....: FJNXP Matrix.....: WG
Date Sampled....: 03/05/03 17:00 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	2.1	0.50	mg/L	MCAWW 300.0A	03/08-03/09/03	3069188
	Dilution Factor: 1			Analysis Time...: 07:06	Analyst ID.....: 0000225	
	Instrument ID...: W01			MS Run #.....: 3069075	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0001A_WG030503_0001

General Chemistry

**Lot-Sample #....: E3C060175-039 Work Order #....: FJNXR Matrix.....: WG
Date Sampled....: 03/05/03 11:35 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bromide	1.7	0.50	mg/L	MCAWW 300.0A	03/10/03	3069190
		Dilution Factor: 1		Analysis Time...: 10:36	Analyst ID.....: 0000225	
		Instrument ID...: W01		MS Run #.....: 3069138	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0001A_WG030503_0002

General Chemistry

**Lot-Sample #....: E3C060175-040 Work Order #....: FJN2R Matrix.....: WG
Date Sampled....: 03/05/03 17:00 Date Received...: 03/06/03 09:45**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	292	50.0	mg/L	MCAWW 300.0A	03/10/03	3069190
	Dilution Factor: 50			Analysis Time...: 09:41	Analyst ID.....: 0000228	
				Instrument ID...: W01	MS Run #.....: 3069138	MDL.....: 0.50

QC DATA ASSOCIATION SUMMARY

E3C060175

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WG	MCAWW 300.0A		3069188	3069075
003	WG	MCAWW 300.0A		3069188	3069075
005	WG	MCAWW 300.0A		3069188	3069075
006	WG	MCAWW 300.0A		3069188	3069075
008	WG	MCAWW 300.0A		3069188	3069075
010	WG	MCAWW 300.0A		3069188	3069075
011	WG	MCAWW 300.0A		3069188	3069075
012	WG	MCAWW 300.0A		3069190	3069138
013	WG	MCAWW 300.0A		3069188	3069075
015	WG	MCAWW 300.0A		3069188	3069075
017	WG	MCAWW 300.0A		3069188	3069075
018	WG	MCAWW 300.0A		3069188	3069075
021	WG	MCAWW 300.0A		3069188	3069075
024	WG	MCAWW 300.0A		3069188	3069075
025	WG	MCAWW 300.0A		3069188	3069075
028	WG	MCAWW 300.0A		3069188	3069075
031	WG	MCAWW 300.0A		3069188	3069075
032	WG	MCAWW 300.0A		3069188	3069075
035	WG	MCAWW 300.0A		3069188	3069075
038	WG	MCAWW 300.0A		3069188	3069075
039	WG	MCAWW 300.0A		3069190	3069138

(Continued on next page)

QC DATA ASSOCIATION SUMMARY

E3C060175

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
040	WG	MCAWW 300.0A		3069190	3069138

METHOD BLANK REPORT

General Chemistry

Client Lot #....: E3C060175

Matrix.....: WATER

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	PREP	BATCH #
		LIMIT	UNITS					
Bromide	ND	Work Order #: FJVH51AA	MB Lot-Sample #:		E3C100000-188			
		0.50	mg/L	MCAWW 300.0A		03/08-03/09/03	3069188	
		Dilution Factor: 1						
		Analysis Time...: 00:15		Analyst ID.....: 000022		Instrument ID...: W01		
Bromide	ND	Work Order #: FJV1X1AA	MB Lot-Sample #:		E3C100000-190			
		0.50	mg/L	MCAWW 300.0A		03/10/03	3069190	
		Dilution Factor: 1						
		Analysis Time...: 08:45		Analyst ID.....: 000022		Instrument ID...: W01		

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: E3C060175

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>PREP</u>
				<u>ANALYSIS DATE</u>	<u>BATCH #</u>
Bromide	100	(90 - 110)	Work Order #: FJVH51AC LCS Lot-Sample#: E3C100000-188 MCAWW 300.0A	03/08/03	3069188
			Dilution Factor: 1 Analysis Time...: 23:57 Instrument ID...: W01		Analyst ID.....: 000022
Bromide	101	(90 - 110)	Work Order #: FJV1X1AC LCS Lot-Sample#: E3C100000-190 MCAWW 300.0A	03/10/03	3069190
			Dilution Factor: 1 Analysis Time...: 08:21 Instrument ID...: W01		Analyst ID.....: 000022

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #....: E3C060175

Matrix.....: WATER

PARAMETER	SPIKE	MEASURED	UNITS	PERCNT	RECVRY	METHOD	PREPARATION-	PREP	BATCH #
	AMOUNT	AMOUNT					ANALYSIS DATE		
Bromide	5.00	4.98	mg/L	100	MCAWW	300.0A	03/08/03	03/08/03	3069188
				Dilution Factor: 1		Analysis Time...: 23:57		Analyst ID.....:	000022
				Instrument ID...: W01					
Bromide	5.00	5.05	mg/L	101	MCAWW	300.0A	03/10/03	03/10/03	3069190
				Dilution Factor: 1		Analysis Time...: 08:21		Analyst ID.....:	000022
				Instrument ID...: W01					

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: E3C060175

Matrix.....: WG

Date Sampled....: 03/05/03 17:00 **Date Received..:** 03/06/03 09:45

PARAMETER	PERCENT	RECOVERY	RPD			PREPARATION- ANALYSIS DATE	PREP BATCH #
	RECOVERY	LIMITS	RPD	LIMITS	METHOD		
Bromide			WO#:	FJNVR1AC-MS/FJNVR1AD-MSD	MS	Lot-Sample #:	E3C060175-001
	101	(80 - 120)		MCAWW 300.0A		03/08/03	3069188
	100	(80 - 120)	0.30 (0-20)	MCAWW 300.0A		03/08/03	3069188
			Dilution Factor: 1				
			Analysis Time...: 08:02		Instrument ID...: W01		Analyst ID.....: 000022
			MS Run #.....:	3069075			
Bromide			WO#:	FJN2R1AC-MS/FJN2R1AD-MSD	MS	Lot-Sample #:	E3C060175-040
	95	(80 - 120)		MCAWW 300.0A		03/10/03	3069190
	126 N	(80 - 120)	8.9 (0-20)	MCAWW 300.0A		03/10/03	3069190
			Dilution Factor: 1				
			Analysis Time...: 12:56		Instrument ID...: W01		Analyst ID.....: 000022
			MS Run #.....:	3069138			

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #....: E3C060175

Matrix.....: WG

Date Sampled...: 03/05/03 17:00 **Date Received..:** 03/06/03 09:45

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCNT			PREPARATION-	PREP	ANALYSIS DATE	BATCH #
	AMOUNT	AMT	AMOUNT	UNITS	RECVRY	RPD				
Bromide WO#: FJNVR1AC-MS/FJNVR1AD-MSD MS Lot-Sample #: E3C060175-001										
	0.88	12.5	13.5	mg/L	101		MCAWW 300.0A	03/08/03	3069188	
	0.88	12.5	13.4	mg/L	100	0.30	MCAWW 300.0A	03/08/03	3069188	
	Dilution Factor: 1									
	Analysis Time...: 08:02 Instrument ID..: W01 Analyst ID.....: 000022									
	MS Run #.....: 3069075									
Bromide WO#: FJN2R1AC-MS/FJN2R1AD-MSD MS Lot-Sample #: E3C060175-040										
	292	125	411	mg/L	95		MCAWW 300.0A	03/10/03	3069190	
	292	125	450 N	mg/L	126	8.9	MCAWW 300.0A	03/10/03	3069190	
	Dilution Factor: 1									
	Analysis Time...: 12:56 Instrument ID..: W01 Analyst ID.....: 000022									
	MS Run #.....: 3069138									

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

ANALYTICAL REPORT

Boeing C6/AGM

Lot #: E3C180167

Olivia Edwards

ARCADIS Geraghty & Miller, Inc

SEVERN TRENT LABORATORIES, INC.

**Diane Suzuki
Project Manager**

March 19, 2003

EXECUTIVE SUMMARY - Detection Highlights

E3C180167

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
HT0002B_WG030503_0004 03/05/03 12:17	001			
Bromide	0.90	0.50	mg/L	MCAWW 300.0A
HT0003B_WG030503_0004 03/05/03 12:17	002			
Bromide	0.52	0.50	mg/L	MCAWW 300.0A
MW0001B_WG030503_0004 03/05/03 12:17	003			
Bromide	1.2	0.50	mg/L	MCAWW 300.0A
HT0002A_WG030503_0006 03/05/03 15:50	004			
Bromide	4.7	0.50	mg/L	MCAWW 300.0A
HT0003A_WG030503_0006 03/05/03 15:50	005			
Bromide	3.0	0.50	mg/L	MCAWW 300.0A
MW0001A_WG030503_0006 03/05/03 15:50	006			
Bromide	2.0	0.50	mg/L	MCAWW 300.0A

METHODS SUMMARY

E3C180167

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Bromide	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SAMPLE SUMMARY

E3C180167

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FKA4G	001	HT0002B_WG030503_0004	03/05/03	12:17
FKA4J	002	HT0003B_WG030503_0004	03/05/03	12:17
FKA4K	003	MW0001B_WG030503_0004	03/05/03	12:17
FKA4N	004	HT0002A_WG030503_0006	03/05/03	15:50
FKA4Q	005	HT0003A_WG030503_0006	03/05/03	15:50
FKA4W	006	MW0001A_WG030503_0006	03/05/03	15:50

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0002B_WG030503_0004

General Chemistry

Lot-Sample #....: E3C180167-001 Work Order #....: FKA4G Matrix.....: WATER
Date Sampled....: 03/05/03 12:17 Date Received...: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	0.90	0.50	mg/L	MCAWW 300.0A	03/18/03	3077293
	Dilution Factor: 1			Analysis Time...: 13:12		Analyst ID.....: 000022
	Instrument ID..: W01			MS Run #.....: 3077180		MDL.....: 0.10

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0003B_WG030503_0004

General Chemistry

Lot-Sample #....: E3C180167-002 Work Order #....: FKA4J Matrix.....: WATER
Date Sampled...: 03/05/03 12:17 Date Received...: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	0.52	0.50	mg/L	MCAWW 300.0A	03/18/03	3077293
	Dilution Factor: 1			Analysis Time..: 13:30	Analyst ID.....: 0000220	
	Instrument ID..: W01			MS Run #.....: 3077180	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW0001B_WG030503_0004

General Chemistry

Lot-Sample #....: E3C180167-003 Work Order #....: FKA4K Matrix.....: WATER
Date Sampled...: 03/05/03 12:17 Date Received..: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	1.2	0.50	mg/L	MCAWW 300.0A	03/18/03	3077293
	Dilution Factor: 1			Analysis Time..: 13:49	Analyst ID.....: 0000220	
	Instrument ID..: W01			MS Run #.....: 3077180	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0002A_WG030503_0006

General Chemistry

Lot-Sample #....: E3C180167-004 Work Order #....: FKA4N Matrix.....: WATER
Date Sampled....: 03/05/03 15:50 Date Received...: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	4.7	0.50	mg/L	MCAWW 300.0A	03/18/03	3077293
		Dilution Factor: 1		Analysis Time..: 14:07	Analyst ID.....: 0000220	
		Instrument ID..: W01		MS Run #.....: 3077180	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0003A_WG030503_0006

General Chemistry

Lot-Sample #....: E3C180167-005 Work Order #....: FKA4Q Matrix.....: WATER
Date Sampled...: 03/05/03 15:50 Date Received...: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	3.0	0.50	mg/L	MCAWW 300.0A	03/18/03	3077293
	Dilution Factor: 1			Analysis Time..: 14:26	Analyst ID.....: 0000220	
	Instrument ID..: W01			MS Run #.....: 3077180	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW0001A_WG030503_0006

General Chemistry

Lot-Sample #....: E3C180167-006 Work Order #....: FKA4W Matrix.....: WATER
Date Sampled....: 03/05/03 15:50 Date Received...: 03/06/03 09:45

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	2.0	0.50	mg/L	MCAWW 300.0A	03/18/03	3077293
		Dilution Factor: 1		Analysis Time...: 14:44	Analyst ID.....: 0000220	
		Instrument ID...: W01		MS Run #.....: 3077180	MDL.....: 0.10	

QC DATA ASSOCIATION SUMMARY

E3C180167

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	MCAWW 300.0A		3077293	3077180
002	WATER	MCAWW 300.0A		3077293	3077180
003	WATER	MCAWW 300.0A		3077293	3077180
004	WATER	MCAWW 300.0A		3077293	3077180
005	WATER	MCAWW 300.0A		3077293	3077180
006	WATER	MCAWW 300.0A		3077293	3077180

METHOD BLANK REPORT

General Chemistry

Client Lot #....: E3C180167

Matrix.....: WATER

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	PREP
		LIMIT	UNITS				
Bromide	ND	Work Order #: FKCK31AA	MB Lot-Sample #:	0.50 mg/L	MCAWW 300.0A	E3C180000-293 03/18/03	3077293
		Dilution Factor: 1					
		Analysis Time..: 12:53			Analyst ID.....: 000022		Instrument ID..: W01

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: E3C180167

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>ANALYSIS DATE</u>	<u>PREP</u>	<u>BATCH #</u>
Bromide	100		(90 - 110)	Work Order #: FKCK31AC LCS Lot-Sample#: E3C180000-293 MCAWW 300.0A		03/18/03		3077293
				Dilution Factor: 1	Analysis Time..: 12:35		Analyst ID.....: 000022	
				Instrument ID..: W01				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #....: E3C180167

Matrix.....: WATER

PARAMETER	SPIKE	MEASURED	PERCNT	PREPARATION-	PREP		
	AMOUNT	AMOUNT	UNITS	RECVRY	ANALYSIS DATE	BATCH #	
Bromide	5.00	5.00	mg/L	100	MCAWW 300.0A	03/18/03	3077293
			Dilution Factor: 1		Analysis Time...: 12:35		Analyst ID.....: 000022
			Instrument ID...: W01				

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: E3C180167

Matrix.....: WATER

Date Sampled....: 03/05/03 12:17 Date Received..: 03/06/03 09:45

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>PREP</u>
			WO#:	FKA4G1AC-MS/FKA4G1AD-MSD	MS	ANALYSIS DATE	BATCH #
Bromide	95	(80 - 120)			MCAWW 300.0A	03/18/03	3077293
	102	(80 - 120)	6.3	(0-20)	MCAWW 300.0A	03/18/03	3077293
			Dilution Factor:	5			
			Analysis Time..:	15:03	Instrument ID..: W01		Analyst ID.....: 000022
			MS Run #.....:	3077180			

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #....: E3C180167

Matrix.....: WATER

Date Sampled...: 03/05/03 12:17 Date Received..: 03/06/03 09:45

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCNT			METHOD	PREPARATION-	PREP
	AMOUNT	AMT	AMOUNT	UNITS	RECVRY	RPD		ANALYSIS	DATE
Bromide			WO#:	FKA4G1AC-MS/FKA4G1AD-MSD	MS	Lot-Sample #:	E3C180167-001		
	0.90	12.5	12.8	mg/L	95		MCAWW 300.0A	03/18/03	3077293
	0.90	12.5	13.6	mg/L	102	6.3	MCAWW 300.0A	03/18/03	3077293
			Dilution Factor:	5					
			Analysis Time..:	15:03			Instrument ID..: W01		Analyst ID.....: 000022
			MS Run #.....:	3077180					

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

ANALYTICAL REPORT

Boeing C6/AGM

Lot #: E3D030175

Olivia Edwards

ARCADIS Geraghty & Miller, Inc

SEVERN TRENT LABORATORIES, INC.

**Diane Suzuki
Project Manager**

April 4, 2003

EXECUTIVE SUMMARY - Detection Highlights

E3D030175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
HT0001A_WG040203_0001 04/02/03 09:45	001			
Bromide	13.8	2.0	mg/L	MCAWW 300.0A
HT0001B_WG040203_0001 04/02/03 10:25	002			
Bromide	263	5.0	mg/L	MCAWW 300.0A
HT0002A_WG040203_0001 04/02/03 10:40	003			
Bromide	5.7	0.50	mg/L	MCAWW 300.0A
HT0002B_WG040203_0001 04/02/03 10:45	004			
Bromide	0.90	0.50	mg/L	MCAWW 300.0A
HT0003A_WG040203_0001 04/02/03 10:51	005			
Bromide	7.3	0.50	mg/L	MCAWW 300.0A
HT0003B_WG040203_0001 04/02/03 10:57	006			
Bromide	0.52	0.50	mg/L	MCAWW 300.0A
MW0001A_WG040203_0001 04/02/03 09:35	007			
Bromide	2.0	0.50	mg/L	MCAWW 300.0A
MW0001B_WG040203_0001 04/02/03 09:40	008			
Bromide	1.9	0.50	mg/L	MCAWW 300.0A

METHODS SUMMARY

E3D030175

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Bromide	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.

SAMPLE SUMMARY

E3D030175

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
FK831	001	HT0001A_WG040203_0001	04/02/03	09:45
FK834	002	HT0001B_WG040203_0001	04/02/03	10:25
FK835	003	HT0002A_WG040203_0001	04/02/03	10:40
FK838	004	HT0002B_WG040203_0001	04/02/03	10:45
FK839	005	HT0003A_WG040203_0001	04/02/03	10:51
FK84D	006	HT0003B_WG040203_0001	04/02/03	10:57
FK84E	007	MW0001A_WG040203_0001	04/02/03	09:35
FK84G	008	MW0001B_WG040203_0001	04/02/03	09:40

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0001A_WG040203_0001

General Chemistry

Lot-Sample #....: E3D030175-001 Work Order #....: FK831 Matrix.....: WATER
Date Sampled....: 04/02/03 09:45 Date Received...: 04/03/03 09:15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	13.8	2.0	mg/L	MCAWW 300.0A	04/03/03	3093322
		Dilution Factor: 4		Analysis Time...: 13:01	Analyst ID.....: 000022	
		Instrument ID...: W01		MS Run #.....: 3093171	MDL.....: 0.40	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0001B_WG040203_0001

General Chemistry

**Lot-Sample #....: E3D030175-002 Work Order #....: FK834 Matrix.....: WATER
Date Sampled....: 04/02/03 10:25 Date Received..: 04/03/03 09:15**

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	263	5.0	mg/L	MCAWW 300.0A	04/03/03	3093322
	Dilution Factor: 10			Analysis Time..: 13:20	Analyst ID.....: 0000221	
	Instrument ID..: W01			MS Run #.....: 3093171	MDL.....: 1.0	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0002A_WG040203_0001

General Chemistry

Lot-Sample #....: E3D030175-003 Work Order #....: FK835 Matrix.....: WATER
Date Sampled....: 04/02/03 10:40 Date Received...: 04/03/03 09:15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	5.7	0.50	mg/L	MCAWW 300.0A	04/03/03	3093322
		Dilution Factor: 1		Analysis Time..: 19:50	Analyst ID.....: 0000221	
		Instrument ID..: W01		MS Run #.....: 3093171	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0002B_WG040203_0001

General Chemistry

**Lot-Sample #....: E3D030175-004 Work Order #....: FK838 Matrix.....: WATER
Date Sampled....: 04/02/03 10:45 Date Received...: 04/03/03 09:15**

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>PREP</u>
					<u>ANALYSIS DATE</u>	<u>BATCH #</u>
Bromide	0.90	0.50	mg/L	MCAWW 300.0A	04/03/03	3093322
	Dilution Factor: 1			Analysis Time...: 20:08	Analyst ID.....: 0000221	
	Instrument ID...: W01			MS Run #.....: 3093171	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0003A_WG040203_0001

General Chemistry

Lot-Sample #....: E3D030175-005 Work Order #....: FK839 Matrix.....: WATER
Date Sampled....: 04/02/03 10:51 Date Received...: 04/03/03 09:15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	7.3	0.50	mg/L	MCAWW 300.0A	04/03/03	3093322
		Dilution Factor: 1		Analysis Time...: 20:27	Analyst ID.....: 0000221	
		Instrument ID...: W01		MS Run #.....: 3093171	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: HT0003B_WG040203_0001

General Chemistry

Lot-Sample #....: E3D030175-006 Work Order #....: FK84D Matrix.....: WATER
Date Sampled....: 04/02/03 10:57 Date Received...: 04/03/03 09:15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	0.52	0.50	mg/L	MCAWW 300.0A	04/03/03	3093322
	Dilution Factor: 1			Analysis Time..: 20:46	Analyst ID.....: 0000221	
	Instrument ID..: W01			MS Run #.....: 3093171	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW0001A_WG040203_0001

General Chemistry

Lot-Sample #....: E3D030175-007 Work Order #....: FK84E Matrix.....: WATER
Date Sampled....: 04/02/03 09:35 Date Received...: 04/03/03 09:15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	2.0	0.50	mg/L	MCAWW 300.0A	04/03/03	3093322
		Dilution Factor: 1		Analysis Time..: 21:04	Analyst ID.....: 0000221	
		Instrument ID..: W01		MS Run #.....: 3093171	MDL.....: 0.10	

ARCADIS GERAGHTY & MILLER, INC

Client Sample ID: MW0001B_WG040203_0001

General Chemistry

Lot-Sample #....: E3D030175-008 Work Order #....: FK84G Matrix.....: WATER
Date Sampled....: 04/02/03 09:40 Date Received...: 04/03/03 09:15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Bromide	1.9	0.50	mg/L	MCAWW 300.0A	04/03/03	3093322
	Dilution Factor: 1			Analysis Time...: 21:23		Analyst ID.....: 0000221
	Instrument ID..: W01			MS Run #.....: 3093171		MDL.....: 0.10

QC DATA ASSOCIATION SUMMARY

E3D030175

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	MCAWW 300.0A		3093322	3093171
002	WATER	MCAWW 300.0A		3093322	3093171
003	WATER	MCAWW 300.0A		3093322	3093171
004	WATER	MCAWW 300.0A		3093322	3093171
005	WATER	MCAWW 300.0A		3093322	3093171
006	WATER	MCAWW 300.0A		3093322	3093171
007	WATER	MCAWW 300.0A		3093322	3093171
008	WATER	MCAWW 300.0A		3093322	3093171

METHOD BLANK REPORT

General Chemistry

Client Lot #....: E3D030175

Matrix.....: WATER

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	PREP
		LIMIT	UNITS				
Bromide	ND	Work Order #: FK9301AA	MB Lot-Sample #:	MCAWW 300.0A	E3D030000-322	04/03/03	3093322
		0.50 mg/L	Dilution Factor: 1				
			Analysis Time...: 12:06	Analyst ID....: 000022		Instrument ID..: W01	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: E3D030175

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>PREP</u>
				<u>ANALYSIS DATE</u>	<u>BATCH #</u>
Bromide	101	(90 - 110)	Work Order #: FK9301AC LCS Lot-Sample#: E3D030000-322 MCAWW 300.0A	04/03/03	3093322
			Dilution Factor: 1 Analysis Time..: 11:33 Instrument ID...: W01		Analyst ID.....: 000022

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #....: E3D030175

Matrix.....: WATER

PARAMETER	SPIKE	MEASURED	PERCNT	PREPARATION-	PREP	
	AMOUNT	AMOUNT	UNITS	RECVRY METHOD	ANALYSIS DATE	BATCH #
Bromide			Work Order #: FK9301AC LCS Lot-Sample#: E3D030000-322			
	5.00	5.05	mg/L 101 MCAWW 300.0A	04/03/03	3093322	
			Dilution Factor: 1 Analysis Time...: 11:33			Analyst ID.....: 000022
			Instrument ID...: W01			

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: E3D030175

Matrix.....: WATER

Date Sampled...: 04/02/03 09:45 Date Received..: 04/03/03 09:15

PARAMETER	PERCENT	RECOVERY	RPD	METHOD	PREPARATION-	PREP
	RECOVERY	LIMITS	RPD		LIMITS	ANALYSIS DATE
Bromide		WO#: FK8311AC-MS/FK8311AD-MSD	MS	Lot-Sample #:	E3D030175-001	
	99	(80 - 120)		MCAWW 300.0A	04/03/03	3093322
	100	(80 - 120)	0.87 (0-20)	MCAWW 300.0A	04/03/03	3093322
		Dilution Factor: 10				
			Analysis Time..: 16:43	Instrument ID..: W01		Analyst ID.....: 000022
				MS Run #.....: 3093171		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #....: E3D030175

Matrix.....: WATER

Date Sampled....: 04/02/03 09:45 **Date Received..:** 04/03/03 09:15

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCNT			PREPARATION-	PREP	
	AMOUNT	AMT	AMOUNT	UNITS	RECVRY	RPD		METHOD	ANALYSIS DATE
Bromide			WO#:	FK8311AC-MS	/FK8311AD-MSD	MS	Lot-Sample #:	E3D030175-001	
	13.8	25.0	38.5	mg/L	99		MCAWW 300.0A	04/03/03	3093322
	13.8	25.0	38.9	mg/L	100	0.87	MCAWW 300.0A	04/03/03	3093322
			Dilution Factor:	10					
			Analysis Time..:	16:43			Instrument ID..:	W01	Analyst ID.....: 000022
			MS Run #.....:	3093171					

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

CHANGE ORDER FORM

STL Lot Number	E3C180167
Client Name	AGM
Contact	Olivia Edwards

- Cancel Work Add Work
 COC Discrepancy TAT change
 Other _____

Instructions/Comments

E3C060175	
HT0002B_WG030503_0004	Bromide
HT0003B_WG030503_0004	Bromide
MW0001B_WG030503_0004	Bromide
HT0002A_WG030503_0006	Bromide
HT0003A_WG030503_0006	Bromide
MW0001A_WG030503_0006	Bromide

Received by: diane suzuki

Date: 03/14/03

Current Date/Time 3/14/2003 13:42

Arcadis
 BRC Former C-6 Facility, Torrance, CA
 Building 2
 CA000594.0001.00002
 Jim Nguyen

AG&M0137673
 James Shamas / Juli Park
 STL-LA
 Diane Suzuki

Overall Report

New	HT0002B_WG030503_0001	3/5/2003	10:30	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample first	
New	HT0002B_WG030503_0002	3/5/2003	11:49	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold	
New	HT0002B_WG030503_0003	3/5/2003	12:02	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample third	
New	HT0002B_WG030503_0004	3/5/2003	12:17	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	SAMPLE	
New	HT0002B_WG030503_0005	3/5/2003	13:17	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample second	
New	HT0003B_WG030503_0001	3/5/2003	10:40	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample first	
New	HT0003B_WG030503_0002	3/5/2003	11:50	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold	
New	HT0003B_WG030503_0003	3/5/2003	12:03	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample third	
New	HT0003B_WG030503_0004	3/5/2003	12:17	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	SAMPLE	
New	HT0003B_WG030503_0005	3/5/2003	13:18	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample second	
New	HT0001B_WG030503_0001	3/5/2003	11:30	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample	
New	HT0001B_WG030503_0002	3/5/2003	13:18	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample	
New	MW0001B_WG030503_0001	3/5/2003	10:50	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample first	
New	MW0001B_WG030503_0002	3/5/2003	11:51	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold	
New	MW0001B_WG030503_0003	3/5/2003	12:03	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample third	
New	MW0001B_WG030503_0004	3/5/2003	12:17	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	SAMPLE	
New	MW0001B_WG030503_0005	3/5/2003	13:19	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample second	
New	HT0002A_WG030503_0001	3/5/2003	10:35	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample first	
New	HT0002A_WG030503_0002	3/5/2003	14:51	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold	
New	HT0002A_WG030503_0003	3/5/2003	15:05	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold	
New	HT0002A_WG030503_0004	3/5/2003	15:20	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	SAMPLE	
New	HT0002A_WG030503_0005	3/5/2003	15:35	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold	
New	HT0002A_WG030503_0006	3/5/2003	15:50	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	SAMPLE	
New	HT0002A_WG030503_0007	3/5/2003	17:00	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample second	
New	HT0003A_WG030503_0001	3/5/2003	10:45	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample first	
New	HT0003A_WG030503_0002	3/5/2003	14:51	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold	

Previously
Prepared

New	HT0003A_WG030503_0003	3/5/2003	15:05	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold
New	HT0003A_WG030503_0004	3/5/2003	15:20	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample third
New	HT0003A_WG030503_0005	3/5/2003	15:35	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold
New	HT0003A_WG030503_0006	3/5/2003	15:50	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	SAMPLE
New	HT0003A_WG030503_0007	3/5/2003	17:00	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample second
New	MW0001A_WG030503_0001	3/5/2003	10:55	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample first
New	MW0001A_WG030503_0002	3/5/2003	14:52	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold
New	MW0001A_WG030503_0003	3/5/2003	15:05	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold
New	MW0001A_WG030503_0004	3/5/2003	15:20	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample third
New	MW0001A_WG030503_0005	3/5/2003	15:35	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	hold
New	MW0001A_WG030503_0006	3/5/2003	15:50	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	SAMPLE
New	MW0001A_WG030503_0007	3/5/2003	17:00	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample second
New	HT0001A_WG030503_0001	3/5/2003	11:35	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample
New	HT0001A_WG030503_0002	3/5/2003	17:00	Aqueous	NA	1	250 ml Sterile Bottle	None	N	85032-Bromide	Norm	sample